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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,227	02/18/2000	Michael E. Ring	CRD 00036	7857

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EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3613

DATE MAILED: 03/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/507,227

Applicant(s)

RING ET AL.

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-29 is/are allowed.
- 6) ☒ Claim(s) 1,3-9,12-17 and 30 is/are rejected.
- 7) ☐ Claim(s) 2,10,11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812

Re: claim 1. Engle shows in figures 1, 2, and 5 an apparatus engageable with a hand brake assembly for automatically applying at least one brake means 29 secured to a railway vehicle with said hand brake assembly, the apparatus comprising: an operating means 20,16,60 having a least a portion 48 thereof engageable with at least one gear 52 of a gear assembly 23B,52,23A (the top ends of elements 23A,23B) disposed in a housing or unnumbered enclosure under element 54 of the hand brake assembly for operating the gear assembly in a direction which will cause an application of the at least one brake means as shown in figure 3, a source of fluid pressure 14 connected to the operating means via elements 33 and 16 and a means or line 33 connected to the source of fluid pressure 14 for initiating a supply of the predetermined pressure to the operating means, but does not disclose that the source of fluid pressure is for periodically supplying a predetermined pressure to the operating means at least sufficient to cause such application of the at least one brake means. In other words, Engle shows and discloses a brake application that is spring applied and fluid released.

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Ring et al. Teach in col. 8 lines 21-23 a fluid pressure applied brake. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake application of Engle to have been fluid applied, as taught by Ring et al., in order to provide a well-known alternate means of applying the hand brake.

Engle shows in figures 1, 2, and 5 an operating means 20,16,60 including linkages connected to the gear assembly of the handbrake mechanism 17. Kanjo et al. '812 teach in col. 1 lines 23-25 that linkages or gears may be utilized in establishing a connection between an operating means and a handbrake mechanism. Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the linkages of the operating means of Engle to have included gears, in view of the teachings of Kanjo et al. '812, in order to provide an alternate means of transferring force between the operating means and the gear assembly of the handbrake mechanism.

Re: claim 3. Engle, as modified, shows in figure 1 of Engle the use of an overload protection device 15.

Re: claim 4. Engle, as modified, shows in figure 5 of Engle the use of at least one valve means 60 connecting the source with the operating means.

3. Claims 5-9, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claims 1 and 4 above, and further in view of Kanjo et al. '363.

Re: claims 5-7 and 9. Kanjo et al. teach the use of a plurality of valves including reciprocating valve 318 and valve 360 connecting the source of brake pressure 328 with

an operating means 368 as shown in figure 21. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Engle, as modified, to have included a plurality of valves, as taught by Kanjo et al., in order to provide a level of redundancy to ensure proper flow control even in the event of failure of one of the valves.

Re: claim 8. Engle, as modified, shows in figure 2 of Engle an unnumbered piston between element 34 and element 35.

Re: claims 14 and 15. Engle, as modified, teaches the use of an apparatus for automatically applying and releasing or controlling the supply of pressure of railway hand brakes by responding to electrical signals. See Kanjo et al. lines 8-9 of the abstract.

4. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1 above, and further in view of Newman, II et al. Engle, as modified, shows the use of a manual means 17 of applying the hand brake. Newman, II et al. teach in figure 4 the use of a push button 250 as a manual means of brake application. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the pressure initiating means of the apparatus of Engle, as modified, to have included a push button, as taught by Newman, II et al., in order to provide an alternate manual means of initiating the supply of pressure.

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5. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1 above, and further in view of WIPO 98/28174 (Corresponding to U.S. Patent 6186602 to Jonner et al. for column and line numbers). WIPO 98/28174 teaches the use of an overload protection means in the form of a pressure regulating means in col. 1 lines 55-56. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the overload protection means of Engle, as modified, to have included a pressure regulating means, as taught by WIPO 98/28174, in order to provide a means to prevent the occurrence of excessive brake application forces which would result in damage to the apparatus.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engle '178 in view of Ring et al. and Kanjo et al. '812 as applied to claim 1, and further in view of Budzich. Budzich teaches the use of a slip clutch to serve as an overload protection means in lines 12-14 of the abstract. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the overload protection means of Engle, as modified, to have included a slip clutch, as taught by Budzich, in order to provide an alternate means of preventing the occurrence of excessive brake application forces which would result in damage to the apparatus.

7. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barefoot in view of Engle '178. Barefoot shows in figure 7 an apparatus for automatically applying at least one brake means secured to a railway vehicle, the apparatus comprising: a motor means 60 having a rotatable shaft 62 carrying a gear member 64

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thereon, the gear member engageable with at least one gear 66 of a gear assembly, and as best shown in figure 4 a means 84, 86, 88 consisting of a microprocessor and transducers connected to the motor via 72,76, 78, 80 for starting the motor and thereby initiating an automatic application of the at least one brake means, but does not disclose the use of the apparatus with a hand brake assembly. Engle teaches in figures 1 and 2 the use of automatic brake application apparatus associated with a hand brake assembly for a railway vehicle. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the automatic braking apparatus of Barefoot in a railway hand brake assembly, as taught by Engle, in order to effect automatic braking of a railway hand brake. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the hand brake assembly of Barefoot, as modified, with a housing in order to protect the components from dust and other forms of contamination.

Allowable Subject Matter

8. Claims 2, 10, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 18-29 are allowed.

Response to Arguments

10. Applicant's arguments filed 1/7/02 have been fully considered but they are not persuasive.

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Re: claim 1. Applicant has amended the claim to include the limitation of the operating means including at least one gear with the at least one gear being engageable with at least one gear of a gear assembly. Engle shows in figures 1, 2, and 5 an operating means 20,16,60 including linkages connected to the gears 52 of the gear assembly associated with the handbrake assembly 17. Kanjo et al. '812 teach in col. 1 lines 23-25 that linkages or gears may be utilized in establishing a connection between an operating means and a handbrake mechanism. Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the linkages of the operating means of Engle to have included gears, in view of the teachings of Kanjo et al. '812, in order to provide an alternate means of transferring force between the operating means and the gear assembly associated with the handbrake mechanism.

Re: claim 30. Examiner notes that the Applicant's argument that the braking apparatus of Barefoot operates in an entirely different manner (particularly, the way in which the brake is applied) than the braking apparatus specified in claim 30 is more specific than the claim language. As Applicant states, the braking apparatus of Barefoot restricts flow of fluid to and from element 60 by adjusting valves 78 and 80. Examiner maintains that it would have been obvious to have utilized a hand brake mechanism, as taught by Engle, to control the valves which ultimately effect the application of the brake means. Accordingly, Engle is used solely for the teaching of a hand brake assembly 17 engageable with an apparatus for automatically applying a brake means. Examiner notes that Barefoot implies the use of a handbrake assembly in col. 8 lines 14-21 where

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the reference discloses "various user operated activators" to effect "control of valves 78 and 80". Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the hand brake assembly of Barefoot, as modified, with a housing in order to protect the components from dust and other forms of contamination. Barefoot, as modified, teaches the use of a housing. See figure 2 of Engle the unnumbered generally rectangular structure to the left of element 39 and above elements 52. Examiner also maintains that the adjusting of the valves 78 and 80 "start" the deceleration of the motor which results in the "initiation" of the application of the brake means.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb 3/11/02
mmb
March 11, 2002


PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600 3/11/02